REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 13-28 are now in the application. Claims 13 has been amended. Claim 28 has been added.

More specifically, the claims have been amended in an effort to distinguish the invention even more clearly from the prior art. Claim 13 is now directed to the embodiment illustrated in Figs. 1 and 2. There, the lens holder 14 is disposed and formed to establish a direct contact with the optically effective surface of the semiconductor element. The at least one lens is mounted "in a defined position relative to the lens holder." The direct contact at the optically effective surface together with the defined position provides for the super-low tolerance manufacture of the device.

Support for the changes to claim 1 are found on page 17, lines 7-8, and in Fig. 2 and its description.

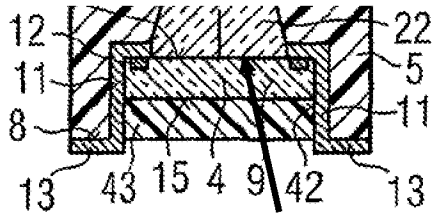
Claim 28 defines the alternative embodiment in which the "support lens" is directly supported on the optically effective surface of the semiconductor element. The lens unit consists of two or more lenses, including the support lens. The support lens is formed with "lateral supports," which provide for the contact between the lens and the semiconductor element. The "supports 33" are shown in Figs. 3 and 4 and described, for example, on page 17, lines 17-23.

Claim 28 further includes a limitation according to which the supports "support said support lens directly on a marginal part of said sensitive surface of said semiconductor element while leaving a central area of said sensitive surface exposed to radiation entering through said plurality of lenses." While this terminology is not supported verbatim in the specification, it is entirely clear from the drawing figures and from the specification, pages 17-18.

This brings us to the prior art. Claims 13-18, 20-23, and 25-27 were rejected as being anticipated by Losehand et al. (US 2004/0095502, hereinafter "Losehand") under 35 U.S.C. § 102.

The claims as presented above clearly distinguish over the prior art. Losehand has a lens 2 which is mounted in a housing 3. A frustoconical segment between the lens and a semiconductor element 4 is filled with a "transparent plastic core." The core 35 makes direct contact with the lower surface of the lens 2 and with the optically effective surface of the semiconductor element 4. While the core 35 – i.e., the filling inside the core – is not a lens per se, we will not argue against the Examiner's interpretation, which reads the "lens unit" of Losehand to meet the limitation calling for the direct contact.

Instead, we shall emphasize the fact that Losehand's "optically effective surface" is exposed in its entirety to the electromagnetic radiation entering through the lens unit. The marginal areas adjoining the optically effective surface are provided with the contact structure. The contacts 12 are covered with the rewiring structure 11, which leads down to the external connections.

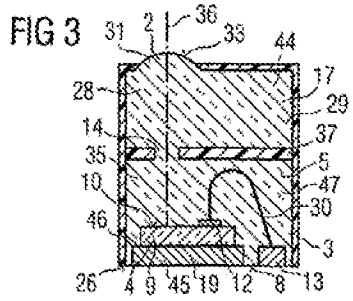


Optically effective surface is exposed only to the lens, not to the housing

With reference to claim 13, the Losehand device does not have a lens holder that is supported directly on the optically effective surface of the semiconductor element. The portion of the semiconductor element that is covered by the lens holder 5 is provided with the device contacts. By definition, the contact pad surface is not an optically effective surface.

With reference to claim 28, Losehand does not have a support lens which is formed with "lateral supports." Even if the core 35 were read on the support lens, then the core would still lack the "supports." Also, the "lens" would not directly contact a lateral area, while leaving a central area exposed to the radiation. In fact, Losehand only exposes the central area without showing any type of distinction between a central area and a lateral area.

FIG 3



With reference to Fig. 3 of Losehand, the lens 2 is a unitary structure filling the entire housing 3. The embodiment of Fig. 3 does not have a lens holder that is directly supported on the optically effective surface of the sensor 4/9, nor does it have a plurality of lenses (with a support lens formed with lateral supports).

We have also reviewed the obviousness rejections of claims 19 and 24. The secondary reference Suenaga (US 6,924,514) has been cited for its teaching of the optical gel forming the optical material. While we acknowledge the teaching of Suenaga, it does not modify the primary teaching of Losehand to such a degree as to

render obvious the invention of claims 13 and 28. In fact, the direct contact between the lens holder and the semiconductor (claim 13) and the direct contact of the support lens with the semiconductor (claim 28) provides for the super-low tolerance manufacture. Any "gel" in between would certainly disturb the very essence of the invention. The optical gel between the flat surface of the support lens and the semiconductor, of course, is placed in the "central area," as recited in claim 28. It would not be properly placed in the "direct contact" regions between the lens and the semiconductor.

With reference to claim 24, it is of no consequence with regard to the essential features of the claimed invention, whether or not the device is made in a flip-chip production. As such, the secondary reference Honda (US 6,476,417) cannot provide the necessary modification of Losehand that would render any of the claims unpatentable.

In summary, we believe that all of the claims, as amended, are patentable in view of the prior art. The allowance of claims 13-28 is solicited.

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